

## Bourbon County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/22/17

Using the most recent IMPLAN data available (2015) adjusted for 2017, 18 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Bourbon County economy.<sup>1</sup>

These 18 sectors have a total direct output of approximately **\$125.0 million** and support **1,063.7 jobs** in Bourbon County. Running the model for all 18 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Bourbon County Economy						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	Output % of Gross Regional Product
<b>Direct Effect</b>	1,063.7	11.34%	\$35,099,700	6.78%	\$124,995,565	24.13%
<b>Indirect Effect</b>	140.3	1.50%	\$8,589,988	1.66%	\$18,199,284	3.51%
<b>Induced Effect</b>	109.1	1.16%	\$6,644,560	1.28%	\$12,155,823	2.35%
<b>Total Effect</b>	1,313.2	14.00%	\$50,334,248	9.72%	\$155,350,672	29.99%

As shown in the above table, agriculture, food, and food processing sectors support **1,313.2 jobs**, or **14.00%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$155.4 million**, roughly **29.99% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 17 agriculture, food, and food processing sectors is approximately **\$50.3 million**, or **9.72% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **9.72% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3A3KB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3A3KB33&Itemid=70)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **685.0 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Bourbon County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	685.0	\$60,937,083
All other crop farming	147.6	\$8,574,388
Landscape and horticultural services	69.8	\$1,762,111
Wholesale trade	38.2	\$7,541,367
Food product machinery manufacturing	36.7	\$10,585,986
Dairy cattle and milk production	25.3	\$11,573,037
Veterinary services	20.5	\$1,681,501
Support activities for agriculture and forestry	20.2	\$898,420
Grain farming	18.2	\$5,165,165
Animal, except poultry, slaughtering	16.4	\$12,018,584

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **\$60.9 million** to the Bourbon County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	685.0	\$60,937,083
Animal, except poultry, slaughtering	16.4	\$12,018,584
Dairy cattle and milk production	25.3	\$11,573,037
Food product machinery manufacturing	36.7	\$10,585,986
All other crop farming	147.6	\$8,574,388
Wholesale trade	38.2	\$7,541,367
Oilseed farming	8.6	\$7,279,776
Grain farming	18.2	\$5,165,165
Owner-occupied dwellings	0.0	\$2,320,754
Truck transportation	12.5	\$2,109,961

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Bourbon County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	8.6	\$7,279,775.62
Grain farming	18.2	\$5,165,164.47
Vegetable and melon farming	0.1	\$28,854.03
Fruit farming	0.9	\$102,277.72
Tree nut farming	0.02	\$4,637.40
Greenhouse, nursery, and floriculture production	4.1	\$826,010.47
All other crop farming	147.6	\$8,574,387.55
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	685.0	\$60,937,080.38
Dairy cattle and milk production	25.3	\$11,573,036.19
Poultry and egg production	1.7	\$1,518,990.52
Animal production, except cattle and poultry and eggs	7.8	\$836,056.29
Commercial hunting and trapping	12.8	\$1,146,174.31
Animal, except poultry, slaughtering	16.4	\$12,018,584.25
Bread and bakery product, except frozen, manufacturing	7.8	\$884,309.29
Frozen cakes and other pastries manufacturing	0.5	\$70,624.42
Food product machinery manufacturing	36.7	\$10,585,986.14
Veterinary services	20.5	\$1,681,500.67
Landscape and horticultural services	69.8	\$1,762,111.19

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Bourbon County, the retail sector was omitted.